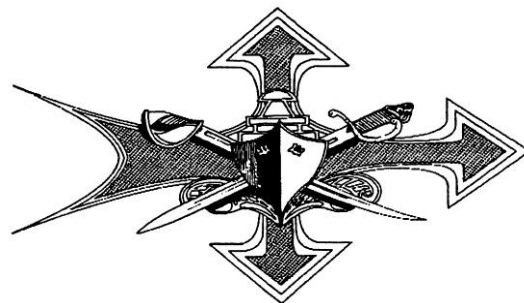


SHIPS' SAFETY BULLETIN

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JANUARY-MARCH 2011

Suggested routing should include CO, XO, department heads, division officers,
CMC, CPO mess, petty officers' lounge, work-center supervisors, and crew's mess.
Blanks provided for initials following review:

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Which Safety Lanyard is the Right One?

By ETC(SW) Jason Mobbs
Naval Safety Center

Recent surveys have shown that not all ships in the fleet have the proper safety lanyards on board. This article clarifies which lanyards are authorized and their uses.



This is the old dyna-brake shock absorbing safety lanyard, MSA – Rose model 501195. It is no longer available in the stock system; but, if you still have them in your inventory they are

authorized provided they pass S-1R of PMS MIP 6231/002. This is the only authorized lanyard under NSN 4240-00-022-2521. If you ordered safety lanyards under this NSN and received anything else, you need to submit a Quality Deficiency Report through your ship's supply department.



This is the twin leg big hook "Y" lanyard. It is authorized for use with unmodified climber sleeves and is only authorized for ascending and descending the vertical ladders. Once personnel transition from the vertical ladder to the platform, they must tie off to an anchor staple with a small hook lanyard. Once all climber sleeves have been modified

the big hook “Y” lanyards are to be destroyed. These big hook ‘Y’ lanyards were authorized by ISE advisory 029-07 (NAVSSS Philadelphia 171205Z MAY 07 - PASEP)



This is the twin leg small hook “Y” lanyard. This is the style of lanyard that all forces afloat should be utilizing.

All of the lanyards approved for forces afloat have a breathable cover over the dyna brake. Should you receive any from supply that have plastic or another non- breathable material, submit a QDR and turn it in to your supply department. ISE advisory 029-07 authorized the following safety lanyards for all forces afloat:

- DBI/SALA: NSN 4240-01-543-5536, PART #1241206 or 1221206
- MSA: NSN 4240-01-544-3384, PART # 10021671 or 10095013

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What Are Your Boat Crews Doing When You’re Not Around?

*By BMCS (SW/AW) Burton Higgins
Naval Safety Center*

Since January 2010, we have seen an increase in small boat mishaps. We have had fatalities, amputations, broken bones and lacerations. Some of the causes were personnel distracted while handling the craft. Other causes were improperly trained personnel, operating at unsafe speeds, and operators not knowing the rules of the road - including not knowing the day and night markings of navigation aids and other vessels.

Are your boat crews actually doing the R-1 check on their MK-1 before donning it? While conducting surveys, I find that 90% of the ships have done the maintenance incorrectly, there are missing parts, or they had the wrong CO₂ cylinder installed. Don’t forget **you** wear the life jacket, not the maintainer! These things are important to our Sailors and we are failing our Sailors in their progression in the proper use of small boat operations and nautical Rules of the Road and the proper wear of the MK-1 lifejacket. Revised PQS 43152-H (*Forces Afloat Small Boat Operations*) supersedes 43152-A thru 43152-G.

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Evidence Preservation

By LT Christine Davy,
Naval Safety Center

During safety investigations conducted onboard Navy ships, the ships don't always preserve all the evidence necessary to conduct a thorough safety investigation. There may be a lack of knowledge and awareness of the required actions to be performed in the case of a possible Class "A" mishap since some of these same investigative procedures apply to other mishaps. I'd like to get the word out to the fleet, namely, ships' safety officers:

Ships' safety officers and senior leadership should become familiar with the governing doctrine for conducting safety investigations. OPNAVINST 5102.1D, *Navy and Marine Corps Mishap and Safety Investigation Reporting and Record Keeping Manual*, is a comprehensive manual and dictates the actions that should be accomplished by the ship and safety investigation board in the event of a Class "A" mishap in paragraphs 1005.8, .9, and .10. You can download the instruction from the "Department of the Navy Issuances" website:

<http://doni.daps.dla.mil/>

Collection of Evidence. When a reportable mishap occurs, an attempt should be made to preserve the site. Physical evidence may include wreckage or damaged equipment or any other physical proof of a mishap in the area directly affected by or surrounding the scene of the mishap. Operational

requirements or damage control measures may require disturbing the scene of the mishap before the safety investigator arrives. Assigned safety investigators must contact those activities for a list of witnesses and any evidence collected before the clean up. If the site has not been disturbed, the safety investigator should gather graphic illustrations, collect physical and medical evidence, and background and technical information. List everyone in the area of the mishap including people at the scene before, during, or after the mishap, and people involved in the rescue and cleanup. Encourage them to develop personal notes concerning the mishap to refer to during interviews. Witnesses should write down their own observations and should not discuss the mishap with other witnesses.

(1) Graphic Illustration. Make a permanent record of the mishap scene:

(a) Make plots, diagrams, or sketches of the scene and equipment, before moving or removing any wreckage. Identify the position of people, equipment, material and debris to facilitate the analysis.

(b) Take photographs or videotape recordings of the wreckage, its distribution, and the surrounding area. Photographs are helpful in preserving items of evidence, which would be destroyed by time or elements. They eliminate lengthy narrative descriptions and provide reviewing officials and units with a clearer understanding of the mishap sequence and the environment. Photograph the mishap site surrounding the site and all items of evidence prior to removal, when possible.

(2) Physical Evidence. Investigators must handle all evidence carefully, including pieces and parts of equipment or material, to make sure they don't alter or destroy it. Wear gloves or avoid handling the evidence with your hands.

(a) Put all evidence in sealed plastic bags, if possible.

(b) Tag each item with a full description and its relationship to the mishap. Use masking tape, index cards, or self-adhesive labels to identify each item of evidence.

Include:

1. When it was collected and by whom.

2. Location, including its relationship to other items.

3. Identification, such as NSN, model number, military specification (MILSPEC), and manufacturer.

4. Store all moved parts, wreckage, and debris in a secure area and safeguard them until released.

5. Physical evidence is not privileged. Other investigators may request the physical evidence. Don't include any privileged information on the label or inside the bags. If necessary, use a numbering, lettering, or other coding system to identify evidence. If you send evidence to a laboratory for analysis, package it carefully

On 5 October 2010, change 2 to OPNAVINST 5102.1D established the following mishap threshold limits:

MISHAP CLASSIFICATIONS. Mishaps are classified by severity. The initial classification of a mishap may change as more accurate information on the severity of the mishap is obtained. In the case of a possible Class "A" mishap, when determining the cost of

damage, it's best to make the assumption toward a Class "A" so the Naval Safety Center can work with the appropriate type commander to convene a safety investigation board in a timely manner.

1. Class A Mishap. The resulting total cost of damages to DoD or non-DoD property in an amount of \$2,000,000 or more; a DoD aircraft is destroyed; or an injury and/or occupational illness result in a fatality or permanent total disability.

2. Class B Mishap. The resulting total cost of damages to DoD or non-DoD property is \$500,000 or more, but less than \$2,000,000. An injury and/or occupational illness result in permanent partial disability or when three or more personnel are hospitalized for inpatient care (beyond observation) as a result of a single mishap.

3. Class C Mishap. The resulting total cost of damages to DoD or non-DoD property is \$50,000 or more, but less than \$500,000; or an event involving one or more DoD personnel that results in one or more days away from work.

Class "A" mishaps are investigated by a safety investigation board (SIB) and reported by naval message in the safety investigation report (SIREP) format.

Class "B" and "C" mishaps are investigated by the command's safety investigator and reported using the Web-Enabled Safety System (WESS), WESS-DS, or naval message.

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Head Protection and Hard Hat Safety

By LT Edward Alexander,
Naval Safety Center

Preventing head injuries is an important factor in every safety program. How many times have you walked out on deck during a deck evolution and saw the team fully dressed out with pants legs tucked in, watches, rings, and jewelry off, and hard hats on. Then, you notice the hard hats are missing chin straps, or the chin strap is flipped on top of the helmet or draped around the back of the helmet, and not under the wearer's chin.

OPNAVINST 5100.19E calls for the team to wear a safety helmet with their chinstrap fastened under the chin as a risk control measure during any deck or seamanship evolution that could injure personnel.

Deck and seamanship evolutions are one of the more hazardous working environments that exist on ships. Examples of deck evolutions include: underway replenishment, operation of boat davits, rigging pilots and accommodation ladders and handling lines. Any mishap could lead to a major catastrophe. It is for this reason that practical safety must be followed and the prescribed safety regulations strictly followed to prevent injury.

Chinstraps are available to increase protection. A hard hat can be a distraction during an evolution if a chinstrap is not worn. Chinstraps will help the hard hat stay on in windy conditions or during times when the evolution calls for the

wearer to move at a fast pace. Without the chinstrap, a line handler could reach out to catch the falling hard hat rather than maintain a grasp on the line and the line load to shipmates.

Injuries to the head are serious; so, use your head and wear your hard hat with the chinstrap fastened under the chin. It might just save a life today.

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Floating Ball Check Valves Prevent Flammable Liquid Leaks

By CDR Mark Hochstetler
Naval Safety Center

Floating ball check valves provide protection against flammable liquid leaks resulting from the over-filling of F-76, JP-5 and oily waste tanks by eliminating the possibility of pressurized fluid spraying from the sounding tube.

Installation of a floating ball check valve is required if the sounding tube terminates in any of the following spaces:

- Main and auxiliary spaces.
- Spaces containing diesel-driven or turbine-driven generators or pumps, oil-fired boilers or incinerators.
- Spaces dedicated to electrical or electronic equipment.
- Spaces with carpeted decks.

They are not required to be installed if:

- The tank is filled only through a funnel drain and the highest point of the tank overflow is below the top of the sounding tube.
- The tank sounding tube has a radar tank level indicating system installed, as long as the requirements of paragraph 541-9.5.3.2.1 of NSTM 541 are met.

- Floating ball check valve not installed where required by NSTM 541 as noted above.

References:

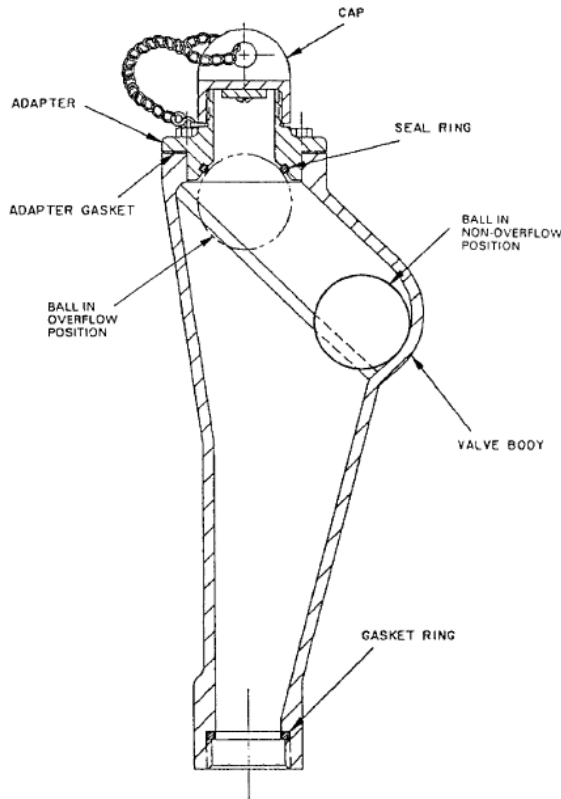
NSTM 541, *Ship Fuel and Fuel Systems*

Para 506d of General Specifications for Overhaul of Surface Ships

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Floating ball check valve NSN

4820-01-258-3954

Most common discrepancies noted during safety surveys are:

- The cap is missing or improperly installed.
- The ball has been removed from the valve body.

Industrial Hygiene Surveys

By CDR David S. Horn
Naval Safety Center

Industrial hygiene (IH) surveys are comprehensive exposure assessments of the workplace. The goal of the IH survey is to recognize and evaluate potential health risks and make recommendations to control those risks. The IH survey establishes and documents exposure levels, specify safety and health requirements for those exposure limits, provide an assessment of the effectiveness of general and local exhaust ventilation systems used for the control of contaminants, and provide a basis for medical surveillance examinations. The IH survey identifies operations that require personal protective equipment (PPE) including respiratory protection, noise and sight hazardous equipment and locations, and personnel for inclusion in medical surveillance programs such as hearing conservation, asbestos, and sight conservation. All-in all, it is an essential

tool for developing your safety and occupational health programs.

Every Navy command is required to have a baseline IH survey. The baseline IH survey is usually completed for new construction ships as soon as possible after commissioning. Ships are required to be in receipt of the completed survey report no later than six months after post shakedown availability. Periodic IH surveys are an update of the baseline industrial hygiene survey. It is necessary as system, equipment, or load out changes can significantly affect the on-board hazard and/or risk. Deterioration of existing controls, modifications, and additions to shipboard processes and equipment will occur over time. Examples of such changes are new or modified equipment or processes, new hazardous chemicals and/or harmful physical agents, and deterioration of existing controls (e.g., ventilation) which degrade over time. An update of the industrial hygiene survey is required every two years to address all changes that may have occurred. Local medical treatment facilities (MTF) (either naval hospital or branch medical clinic) or environmental preventive medicine units, (NEPMUs) conduct IH surveys for afloat commands. Schedule surveys through the IH department at least six months before the expiration of their current IH survey. If a ship is in a major availability, schedule the survey to occur after the completion of the availability.

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How's Your Paint Locker?

*By HMC(DSW/EXW/FMF) Ron Nading
Naval Safety Center*

During shipboard surveys I've conducted, I've discovered potentially major hazards lurking aboard every ship.

Most are not because of laziness or complacency, but show a lack of knowledge--not knowing what is within regulations and what is not.

For instance, there are paint lockers--one of the most overlooked--or should I say--disorganized and mismanaged areas aboard any ship. I have yet to see an outstanding paint locker, or even a satisfactory one. It seems these lockers receive little respect from crewmembers. The lockers I've seen are dirty and disorganized spaces, and, without proper care and maintenance, they can become one of any ship's biggest hazards.

Paragraph C1801b of OPNAVINST 5100.19E states that many paints contain flammable solvents and, therefore present a fire hazard. For those who have worked with paint, this seems obvious. Most paints have a low flash point, and with the massive amounts of paints stowed aboard ship, it is imperative that paint lockers be managed with care. It only takes a little work and attention to detail to make your shipboard paint locker safe and efficient. The following are tips for improving a paint locker:

- First, and foremost, get it organized. If the paint locker on your ship is "too far gone," start over. Clear

the space, properly clean it and make sure all space equipment is working (paint mixers, ventilation, installed firefighting equip). Once you lay this kind of a foundation, everything else falls into place.

- According to paragraph B0508f of OPNAVINST 5100.19E, paint lockers must contain an eyewash station that is easily accessible, unobstructed and in good working order and it should be able to continuously pump water for 15 minutes at a flow rate of 0.4 gallons per minute. A green sign with white letters denoting "Eye Wash Station" must mark the station (paragraph C0508c of OPNAVINST 5100.19E). Order signs using NSN 9905-01-345-4521.

- Make sure the space is adequately ventilated. This is often difficult because ventilation equipment degrades over time. But, poor ventilation can potentially be your locker's biggest danger! If not vented, paint vapors collect to create a toxic and highly flammable environment. Your locker's exhaust vent should be within two feet of the deck, and ventilation grating must be free of debris for proper operation. If you suspect your ventilation is not working efficiently, review the related-maintenance schedule and report it to your work-center supervisor. If the space ventilation is out of commission, add the repair job to your ship's CSMP so this critical safety discrepancy gets repaired.

- Once all preliminary and preparatory work is finished, it's time to add paint. Make sure paint is stowed for sea, and does not interfere with the exhaust vent or eye-wash station. You must store paint, brushes, and stirring sticks in closed metal containers (paragraph C1803e of OPNAVINST 5100.19E). Do not stow paints with

oxidizers or acids (paragraph C2304a and Appendix C23-F of OPNAVINST 5100.19E). Stow your paint neatly so you maintain an orderly appearance in the paint locker.

By taking these precautions seriously, you'll have an efficient and safe paint locker. Your locker is now in excellent material condition. But, you have one more hurdle - paint accountability. Make sure all paint is issued and returned promptly. Upon completion, properly dispose of all paint and associated material.

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Laundry Dryer Fires!

*By MMC (SW/AW) Esters Wright,
Naval Safety Center*

There are some obvious ways that fires can start in your ship's laundry spaces and then there are the not so obvious.

Paragraph b655 of General Specifications for Overhaul (GSO) of Surface Ships requires each laundry dryer to display a "**Prevent Laundry Dryer Fires**" placard on the front of the machine.

After some extensive research, I learned that these placards were not as easy to obtain as they should be. That probably explains why, after many safety surveys, very few ships have these placards displayed. Here is the part number to order through supply: 0118-LF-981-6600 NAVSEA FORM 1995/93

or, using the follow web site
<https://forms.daps.dla.mil/gifs/9816600.gif>

Keep yourself, your equipment and your shipmates safe. Here's a copy of the placard.

PREVENT LAUNDRY DRYER FIRES

WARNING

SPONTANEOUS COMBUSTION CAN OCCUR IN FRESH LAUNDERED ITEMS WITHIN 1 TO 4 HOURS AFTER COMPLETION OF THE DRYING CYCLE. THIS MAY BE DUE TO ANY COMBINATION OF HIGH TEMPERATURE, EXCESS SOAP, GREASES, OILS, OR DETERGENT IN THE FABRIC, OR BUILD UP OF STATIC CHARGE IN SYNTHETIC FABRICS.

TO PREVENT FIRES

1. ACCOMPLISH ALL PRESCRIBED LAUNDRY CYCLES.
2. ENSURE THAT ALL DRYER LOADS RECEIVE A MINIMUM OF 5 TO 10 MINUTE TUMBLING COOL DOWN. DRYER EXHAUST TEMPERATURE SHOULD BE APPROXIMATELY 135F AFTER THE COOL DOWN CYCLE WITH DAMPERS SET TO DELIVER AIR AT AMBIENT TEMPERATURE as applicable.
3. REMOVE ALL LAUNDERED ITEMS FROM THE DRYER WHEN THE DRYING CYCLE IS COMPLETED.
4. OVERHAUL ALL DRYER LOADS TO PREVENT RESIDUAL HEAT BUILD-UP. DO NOT LEAVE THE LAUNDRY UNMANNED UNTIL THIS HAS BEEN ACCOMPLISHED.

0177-226-5300

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Refrigerant Usage Logs

By MMC (SW/AW) Esters Wright
Naval Safety Center

During safety surveys, I often find many discrepancies with refrigerant usage logs. Most common discrepancies noted are: tracking of refrigerant usage and procurement is inaccurate and in-effective. Day-to-day service maintenance report logs are not being utilized to document corrective and preventive maintenance. Accidental or unintentional venting forms are not being used to tracking refrigerant loss. In-addition, logs are not being routed to the engineer officer for signatures and retention onboard for three years for accountability. The annualized leakage rate from shipboard chilled water air conditioning plants should not exceed 15% of the total installed charge. And the annualized leakage rate from ship stores and cargo refrigeration systems does not exceed 35% of the total installed charge. Accurately tracking and logging maintenance may save yours and your shipmate's life! Ref: NSTM 516-1.11, (FIG 516-1-9, 516-1-10, 516-1.11.2 (1) PMS MIP 5161 series, and MIP 5140 series

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General Safety Note Corner:



What is wrong with this picture? You guessed it; no grade “B” shock mounts for these bottles. Racks fitted with metal collars, for gas cylinders shall be similar to drawing, NAVSEA 5184287 REV A, modified to stow cylinders with minor variations in diameter. Cylinders shall be stowed with valve end up and with caps screwed in place. Stowage shall permit the removal of any cylinder without disturbing other cylinders. Cylinder stowage shall meet grade B shock. Cylinders of acetylene, cyclopropane, ethylene, hydrogen, non-liquid petroleum, liquefied petroleum (butane and propane), and other flammable or explosive gases shall be stowed on weather decks unless a gas cylinder storeroom (flammable) is provided.